Proposed Rules

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This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF ENERGY

10 CFR Part 430

[EERE–2019–BT–STD–0030]

Energy Conservation Program: Energy Conservation Standards for General Service Fluorescent Lamps and Incandescent Reflector Lamps

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Request for information.

SUMMARY: The U.S. Department of Energy (''DOE'') is initiating an effort to determine whether to amend the current energy conservation standards for general service fluorescent lamps (''GSFLs'') and incandescent reflector lamps (''IRLs''). Under the Energy Policy and Conservation Act, as amended, DOE must review these standards at least once every six years and publish either a notice of proposed rulemaking (''NOPR'') to propose new standards for GSFLs and/or IRLs or a notice of determination that the existing standards do not need to be amended. This request for information (''RFI'') solicits information from the public to help DOE determine whether amended standards for GSFLs and IRLs would result in significant energy savings and whether such standards would be technologically feasible and economically justified. DOE welcomes written comments from the public on any subject within the scope of this document (including those topics not specifically raised), as well as the submission of data and other relevant information.

DATES: Written comments and information will be accepted on or before June 1, 2020.

ADDRESSES: Interested persons are encouraged to submit comments using the Federal eRulemaking Portal at *http://www.regulations.gov.* Follow the instructions for submitting comments. Alternatively, interested persons may submit comments, identified by docket number EERE–2019–BT–STD–0030, by any of the following methods:

1. *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.

2. *Email: GSFLIRL2019STD0030@ee.doe.gov.* Include the docket number EERE–2019–BT–STD–0030 in the subject line of the message.

3. *Postal Mail:* Appliance and Equipment Standards Program, U.S. Department of Energy, Building Technologies Office, Mailstop EE–5B, 1000 Independence Avenue SW, Washington, DC 20585–0121. Telephone: (202) 287–1445. If possible, please submit all items on a compact disc (''CD''), in which case it is not necessary to include printed copies.

4. *Hand Delivery/Courier:* Appliance and Equipment Standards Program, U.S. Department of Energy, Building Technologies Office, 950 L'Enfant Plaza SW, 6th Floor, Washington, DC 20024. Telephone: (202) 287–1445. If possible, please submit all items on a CD, in which case it is not necessary to include printed copies.

No telefacsimilies (faxes) will be accepted. For detailed instructions on submitting comments and additional information on this process, see section IV of this document.

Docket: The docket for this activity, which includes **Federal Register** notices, comments, and other supporting documents/materials, is available for review at *http://www.regulations.gov.* All documents in the docket are listed in the *http://www.regulations.gov* index. However, some documents listed in the index, such as those containing information that is exempt from public disclosure, may not be publicly available.

The docket web page can be found at *http://www.regulations.gov/#!docketDetail;D=EERE-2019-BT-STD-0030.* The docket web page contains instructions on how to access all documents, including public comments, in the docket. See section IV for information on how to submit comments through *http://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Ms. Lucy deButts, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Office, EE–5B, 1000 Independence Avenue SW, Washington, DC 20585–0121. Telephone: (202) 287–1604. Email: *ApplianceStandardsQuestions@ee.doe.gov.*

Ms. Kathryn McIntosh, U.S. Department of Energy, Office of the General Counsel, GC–33, 1000 Independence Avenue SW, Washington, DC 20585–0121. Telephone: (202) 586–2002. Email: *Kathryn.McIntosh@hq.doe.gov.*

For further information on how to submit a comment, or review other public comments and the docket contact the Appliance and Equipment Standards Program staff at (202) 287–1445 or by email: *ApplianceStandardsQuestions@ee.doe.gov.*

SUPPLEMENTARY INFORMATION:

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I. Introduction

A. Authority and Background

The Energy Policy and Conservation Act, as amended (''EPCA''),[1] authorizes DOE to regulate the energy efficiency of a number of consumer products and certain industrial equipment. (42 U.S.C. 6291–6317) Title III, Part B [2] of EPCA

[1] All references to EPCA in this document refer to the statute as amended through America's Water Infrastructure Act of 2018, Public Law 115–270 (October 23, 2018).

[2] For editorial reasons, upon codification in the U.S. Code, Part B was redesignated Part A.

established the Energy Conservation Program for Consumer Products Other Than Automobiles. These products include GSFLs and IRLs, the subject of this document. (42 U.S.C. 6292(a)(14))

The energy conservation program under EPCA consists essentially of four parts: (1) Testing, (2) labeling, (3) Federal energy conservation standards, and (4) certification and enforcement procedures. Relevant provisions of EPCA specifically include definitions (42 U.S.C. 6291), test procedures (42 U.S.C. 6293), labeling provisions (42 U.S.C. 6294), energy conservation standards (42 U.S.C. 6295), and the authority to require information and reports from manufacturers (42 U.S.C. 6296).

Federal energy efficiency requirements for covered products established under EPCA generally supersede State laws and regulations concerning energy conservation testing, labeling, and standards. (42 U.S.C. 6297(a)–(c)). DOE may, however, grant waivers of Federal preemption for particular State laws or regulations, in accordance with the procedures and other provisions set forth under EPCA. See 42 U.S.C. 6297(d).

Amendments to EPCA in the Energy Policy Act of 1992 (''EPAct 1992''; Pub. L. 102–486), established energy conservation standards for certain classes of GSFLs and IRLs, and authorized DOE to conduct two rulemaking cycles to determine whether these standards should be amended. (42 U.S.C. 6295(i)(1) and (3)–(4)) EPCA also authorized DOE to adopt standards for additional GSFLs, if such standards were warranted. (42 U.S.C. 6295(i)(5)). DOE completed the first of these rulemaking cycles in a final rule published on July 14, 2009, that adopted amended performance standards for GSFLs and IRLs manufactured on or after July 14, 2012. 74 FR 34080 (''2009 GSFL–IRL ECS final rule''). That rule adopted standards for additional GSFLs, amended the definition of ''colored fluorescent lamp'' and ''rated wattage,'' and also adopted test procedures applicable to the newly covered GSFLs. *Id.* DOE completed a second rulemaking cycle to amend the standards for GSFLs and IRLs by publishing a final rule on January 26, 2015. 80 FR 4042 (''2015 GSFL–IRL ECS final rule''). In this rule DOE amended standards for GSFLs; and concluded that amending standards for IRLs would not be economically justified. *Id.* The current energy conservation standards for GSFLs and IRLs are located in Title 10 of the Code of Federal Regulations (''CFR'') section 430.32. The currently applicable DOE test procedures appear at 10 CFR part 430, subpart B, appendix R.

EPCA also requires that, not later than 6 years after the issuance of any final rule establishing or amending a standard, DOE evaluate the energy conservation standards for each type of covered product, including those at issue here, and publish either a notice of determination that the standards do not need to be amended, or a NOPR that includes new proposed energy conservation standards (proceeding to a final rule, as appropriate). (42 U.S.C. 6295(m)(1)) DOE must make the analysis on which the determination is based publicly available and provide an opportunity for written comment. (42 U.S.C. 6295(m)(2)) In making a determination that the standards do not need to be amended, DOE must evaluate whether amended standards (1) will result in significant conservation of energy, (2) are technologically feasible, and (3) are cost effective as described under 42 U.S.C. 6295(o)(2)(B)(i)(II). (42 U.S.C. 6295(m)(1)(A); 42 U.S.C. 6295(n)(2)) Under 42 U.S.C. 6295(o)(2)(B)(i)(II), DOE must determine whether the benefits of a standard exceed its burdens by, to the greatest extent practicable, considering the savings in operating costs throughout the estimated average life of the covered product in the type (or class) compared to any increase in the price of, or in the initial charges for, or maintenance expenses of, the covered products which are likely to result from the imposition of the standard. If DOE determines not to amend a standard based on the statutory criteria, not later than 3 years after the issuance of a final determination not to amend standards, DOE must publish either a notice of determination that standards for the product do not need to be amended, or a NOPR including new proposed energy conservation standards (proceeding to a final rule, as appropriate). (42 U.S.C. 6295(m)(3)(B))

In determining whether to propose new standards, DOE must evaluate that proposal against the criteria of 42 U.S.C. 6295(o), as described in the following section, and follow the rulemaking procedures set out in 42 U.S.C. 6295(p). (42 U.S.C. 6295(m)(1)(B) If DOE decides to amend the standard based on the statutory criteria, DOE must publish a final rule not later than two years after energy conservation standards are proposed. (42 U.S.C. 6295(m)(3)(A))

DOE is publishing this RFI to collect data and information to inform its decision consistent with its obligations under EPCA.

B. Rulemaking Process

DOE must follow specific statutory criteria for prescribing new or amended standards for covered products. EPCA requires that any new or amended energy conservation standard prescribed by the Secretary be designed to achieve the maximum improvement in energy or water efficiency that is technologically feasible and economically justified. (42 U.S.C. 6295(o)(2)(A)) EPCA also precludes DOE from adopting any standard that would not result in the significant conservation of energy. (42 U.S.C. 6295(o)(3)(B)) To determine whether a standard is economically justified, EPCA requires that DOE determine whether the benefits of the standard exceed its burdens by considering, to the greatest extent practicable, the following seven factors:

(1) The economic impact of the standard on the manufacturers and consumers of the affected products;

(2) The savings in operating costs throughout the estimated average life of the product compared to any increases in the initial cost, or maintenance expenses;

(3) The total projected amount of energy and water (if applicable) savings likely to result directly from the standard;

(4) Any lessening of the utility or the performance of the products likely to result from the standard;

(5) The impact of any lessening of competition, as determined in writing by the Attorney General, that is likely to result from the standard;

(6) The need for national energy and water conservation; and

(7) Other factors the Secretary of Energy (Secretary) considers relevant.

(42 U.S.C. 6295(o)(2)(B)(i)(I)–(VII))

DOE fulfills these and other applicable requirements by conducting a series of analyses throughout the rulemaking process. Table I.1 shows the individual analyses that are performed to satisfy each of the requirements within EPCA.

TABLE I.1—EPCA REQUIREMENTS AND CORRESPONDING DOE ANALYSIS

EPCA requirement	Corresponding DOE analysis
Significant Energy Savings	• Shipments Analysis • National Impact Analysis • Energy and Water Use Determination
Technological Feasibility	• Market and Technology Assessment • Screening Analysis • Engineering Analysis
Economic Justification	
1. Economic impact on manufacturers and consumers.	• Manufacturer Impact Analysis • Life-Cycle Cost and Payback Period Analysis • Life-Cycle Cost Subgroup Analysis • Shipments Analysis
2. Lifetime operating cost savings compared to increased cost for the product.	• Markups for Product Price Determination • Energy and Water Use Determination • Life-Cycle Cost and Payback Period Analysis
3. Total projected energy savings	• Shipments Analysis • National Impact Analysis
4. Impact on utility or performance	• Screening Analysis • Engineering Analysis
5. Impact of any lessening of competition	• Manufacturer Impact Analysis
6. Need for national energy and water conservation.	• Shipments Analysis • National Impact Analysis
7. Other factors the Secretary considers relevant.	• Employment Impact Analysis • Utility Impact Analysis • Emissions Analysis • Monetization of Emission Reductions Benefits • Regulatory Impact Analysis

As detailed throughout this RFI, DOE is publishing this document seeking input and data from interested parties to aid in the development of the technical analyses on which DOE will ultimately rely to determine whether (and if so, how) to amend the standards for GSFLs and IRLs.

II. Request for Information and Comments

In the following sections, DOE has identified a variety of issues on which it seeks input to aid in the development of the technical and economic analyses regarding whether amended standards for GSFLs and IRLs may be warranted. DOE also welcomes comments on other issues relevant to this data-gathering process that may not specifically be identified in this document.

As an initial matter, DOE seeks comment on whether there have been sufficient technological or market changes since the most recent standards update that may justify a new rulemaking to consider more stringent standards. Specifically, DOE seeks data and information that could enable the agency to determine whether DOE should propose a ''no new standard'' determination because a more stringent standard: (1) Would not result in a significant savings of energy; (2) is not technologically feasible; (3) is not economically justified; or (4) any combination of foregoing.

A. Products Covered by This Process

This RFI covers those products that meet the definitions of GSFL and IRL, as codified at 10 CFR 430.2. DOE conducts separate analyses of GSFLs and IRLs.

1. Definitions

The definition of ''general service fluorescent lamp'' is based on the definition of ''fluorescent lamp,'' both of which are specified below.

Fluorescent lamp means a low pressure mercury electric-discharge source in which a fluorescing coating transforms some of the ultraviolet energy generated by the mercury discharge into light, including only the following:

(1) Any straight-shaped lamp (commonly referred to as 4-foot medium bipin lamps) with medium bipin bases of nominal overall length of 48 inches and rated wattage of 25 or more;

(2) Any U-shaped lamp (commonly referred to as 2-foot U-shaped lamps) with medium bipin bases of nominal overall length between 22 and 25 inches and rated wattage of 25 or more;

(3) Any rapid start lamp (commonly referred to as 8-foot high output lamps) with recessed double contact bases of nominal overall length of 96 inches;

(4) Any instant start lamp (commonly referred to as 8-foot slimline lamps) with single pin bases of nominal overall length of 96 inches and rated wattage of 49 or more;

(5) Any straight-shaped lamp (commonly referred to as 4-foot miniature bipin standard output lamps) with miniature bipin bases of nominal overall length between 45 and 48 inches and rated wattage of 25 or more; and

(6) Any straight-shaped lamp (commonly referred to 4-foot miniature bipin high output lamps) with miniature bipin bases of nominal overall length between 45 and 48 inches and rated wattage of 44 or more.

General service fluorescent lamp means any fluorescent lamp which can be used to satisfy the majority of fluorescent lighting applications, but does not include any lamp designed and marketed for the following nongeneral application:

(1) Fluorescent lamps designed to promote plant growth;

(2) Fluorescent lamps specifically designed for cold temperature applications;

(3) Colored fluorescent lamps;

(4) Impact-resistant fluorescent lamps;

(5) Reflectorized or aperture lamps;

(6) Fluorescent lamps designed for use in reprographic equipment;

(7) Lamps primarily designed to produce radiation in the ultra-violet region of the spectrum; and

(8) Lamps with a Color Rendering Index of 87 or greater.

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DOE also defines the following lamp types not included in the GSFL definition: ''cold temperature fluorescent lamp,'' ''colored fluorescent lamp,'' ''impact-resistant fluorescent lamp,'' ''reflectorized or aperture lamp,'' ''fluorescent lamp designed for use in reprographic equipment.'' (*See* 10 CFR 430.2 for complete definitions.)

DOE defines ''incandescent reflector lamp'' as follows:

Incandescent reflector lamp (commonly referred to as a reflector lamp) means any lamp in which light is produced by a filament heated to incandescence by an electric current, which: Contains an inner reflective coating on the outer bulb to direct the light; is not colored; is not designed for rough or vibration service applications; is not an R20 short lamp; has an R, PAR, ER, BR, BPAR, or similar bulb shapes with an E26 medium screw base; has a rated voltage or voltage range that lies at least partially in the range of 115 and 130 volts; has a diameter that exceeds 2.25 inches; and has a rated wattage that is 40 watts or higher.

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DOE has separate definitions for ''rough or vibration service incandescent reflector lamp'' and ''R20 short lamp.'' Additionally, DOE uses industry standards to define the size and shape of certain reflector lamp shapes: The bulged parabolic reflector (''BPAR'') incandescent reflector lamp definition references ANSI C78.21–2003 [3]; the R20 and bulged reflector (''BR'') incandescent reflector lamp definitions reference ANSI C79.1–1994; [4] and the elliptical reflector (''ER'') incandescent reflector lamp definition references both ANSI C79.1–1994 and ANSI C78.21–1989. (See 10 CFR 430.2 for complete definitions.) There is a 2002 version available for ANSI C79.1 [5] and 2011 version of ANSI C78.21 [6] available. DOE is considering updating the definitions with the latest versions of the currently referenced industry standards. Additionally, DOE is considering providing definitions for reflector (''R'') and parabolic aluminized reflector (''PAR'') incandescent reflector lamps that reference the 2011 version of ANSI C78.21.

Issue 1: DOE seeks comment on updating the industry references for the definitions of BPAR, R20, ER, and BR incandescent reflector lamps. DOE also seeks comments on providing a definition for R and PAR incandescent reflector shapes.

Issue 2: DOE seeks feedback on whether the definitions for GSFLs and IRLs require any revisions—and if so, how those definitions should be revised. DOE also requests feedback on whether definitions related to GSFLs and IRLs require any revisions, and if so, how these should be revised.

Issue 3: DOE seeks comment on whether additional product definitions are necessary to close any potential gaps in coverage between product types. DOE also seeks input on whether such products currently exist in the market or whether they are being planned for introduction.

EPCA defines an incandescent reflector lamp as a lamp that ''has a rated wattage that is 40 watts or higher'' but does not provide an upper wattage limit. (42 U.S.C. 6291(30)(C)(ii) and (F)) Current DOE energy conservation standards cover IRLs with rated wattages greater than or equal to 40 watts (''W'') and less than or equal to 205 W. 10 CFR 430.32(n)(6) Based on an initial assessment of the market, IRLs higher than 205 W comprise a small portion of product offerings.

Issue 4: DOE seeks feedback on the shipment volume of IRLs with wattages higher than 205 W and the performance characteristics (including wattage, lumen output, and lifetime), shape, and diameter of IRLs in this wattage range.

2. Certain ER, BR, and R IRLs

As amended by section 322(b) of the Energy Independence and Security Act of 2007 (''EISA 2007''; Pub. L. 110–140), EPCA exempted certain IRLs from the statutorily prescribed standards: (1) Lamps rated 50 watts or less that are ER30, BR30, BR40, or ER40; (2) lamps rated 65 watts that are BR30, BR40, or ER40 lamps; and (3) R20 incandescent reflector lamps rated 45 watts or less (referred to as ''certain ER, BR, and R lamps''). (42 U.S.C. 6295(i)(1)(C))

In the 2009 GSFL–IRL ECS rulemaking, DOE initially concluded that it was precluded from adopting energy conservation standards for the certain ER, BR, and R lamps. 73 FR 13620, 13626 (March 13, 2008). Based on comments received in response to the advanced notice of proposed rulemaking (''ANOPR''), DOE re-evaluated its initial interpretation of the statutory exemption of the certain ER, BR, and R lamps and whether the required rulemaking cycles authorized DOE to reconsider the exemptions. 74 FR 16920, 16930–16931 (Apr. 13, 2009). As a practical matter, because DOE did not wish to delay the rulemaking and resulting potential energy savings for the sole reason of considering these certain R, ER, BR lamps, it did not include these lamps in the analysis. *Id.* and 74 FR 34080, 34092.

On May 3, 2010, DOE initiated a separate rulemaking to consider standards for these certain ER, BR, and R IRLs by issuing a notice of public meeting and availability of a framework document. 75 FR 23191 (May 3, 2010); see also 80 FR 4042, 4050. DOE held a public meeting on May 26, 2010, but did not publish any further documents in this docket.

In the 2015 GSFL–IRL ECS rulemaking DOE did not consider standards for certain ER, BR, and R lamps when evaluating standards for IRLs because they were the subject of the separate rulemaking when the 2015 GSFL–IRL ECS rulemaking was initiated in September 2011. 76 FR 56678, 56679. Subsequently, DOE suspended activity on the separate rulemaking on the certain ER, BR, and R lamps as a result of a then applicable Appropriations Rider (section 315 of Pub. L. 112–74 (Dec. 23, 2011)), which prohibited DOE from using appropriated funds to implement or enforce standards for ER, BR, and BPAR IRLs. See, 79 FR 24068, 24078 and 80 FR 4042, 4056. Also, because of the Appropriations Rider (section 322 of Pub. L. 113–76 (January 17, 2014)), DOE did not consider ER, BR, or BPAR IRLs (that do not fall in the certain ER, BR and R lamp category) in the 2015 GSFL–IRL ECS rulemaking. 80 FR 4042, 4057.

The Appropriations Rider is no longer in effect.[7] Therefore, in this analysis DOE is considering analyzing certain ER, BR, and R IRLs.

B. Market and Technology Assessment

The market and technology assessment that DOE routinely conducts when analyzing the impacts of a potential new or amended energy conservation standard provides information about the GSFL and IRL industry that will be used in DOE's analysis throughout the rulemaking process. DOE uses qualitative and quantitative information to characterize the structure of the industry and market.

[3] American National Standards Institute, *American National Standards For Electric Lamps—PAR and R Shapes.* Approved October 30, 2003.

[4] American National Standards Institute, *American National Standard for Nomenclature for Glass Bulbs-Intended for Use with Electric Lamps,* Approved March 24, 1994.

[5] American National Standards Institute, *American National Standard For Electric Lamps—Nomenclature for Glass Bulbs Intended for Use with Electric Lamps.* Approved September 16, 2002.

[6] American National Standards Institute, *American National Standard for Electric Lamps—PAR and R Shapes. Approved January 17, 2017.*

[7] The Appropriations Rider expired on May 5, 2017, when the Consolidated Appropriations Act of 2017 was enacted. See, the Consolidated Appropriations Act of 2017 (Pub. L. 115–31, div. D, tit. III); see also, Consolidated Appropriations Act, 2018 (Pub. L. 115–141).

DOE identifies manufacturers, estimates market shares and trends, addresses regulatory and non-regulatory initiatives intended to improve energy efficiency or reduce energy consumption, and explores the potential for efficiency improvements in the design and manufacturing of GSFLs and IRLs. Additionally, DOE considers conducting interviews with manufacturers to improve its assessment of the market and available technologies for GSFLs and IRLs.

1. Product Classes

When evaluating and establishing energy conservation standards, DOE may divide covered products into product classes by the type of energy used, or by capacity or other performance-related features that justify a standard higher or lower than that which applies (or would apply) for such type (or class) for any group of covered products which have the same function or intended use. (42 U.S.C. 6295(q)) In making a determination whether capacity or another performance-related feature justifies a separate product class, DOE must consider such factors as the utility of the feature to the consumer and other factors DOE deems appropriate. (*Id.*) Current standards for IRLs and GSFLs require products to meet a minimum lamp efficacy (lumens divided by wattage [''lm/W'']). To identify product-class setting factors, DOE examined performance features that offer a unique utility and would impact lamp efficacy, and thereby energy consumption.

For GSFLs, the current energy conservation standards specified in 10 CFR 430.32(n)(4) are based on 12 product classes as analyzed in the 2015 GSFL–IRL ECS final rule, separated according to the following three factors: (1) Correlated color temperature (''CCT''); (2) physical constraints of lamps (*i.e.,* lamp shape and length); and (3) lumen package (*i.e.,* standard output (''SO'') versus high output (''HO'')). 80 FR 4042, 4063. Table II.1 lists the current 12 product classes for GSFLs.

TABLE II.1—CURRENT GSFL PRODUCT CLASSES

Lamp type	CCT
4-foot medium bipin	≤4,500 K
	>4,500 K and ≤7,000 K
2-foot U-shaped	≤4,500 K
	>4,500 K and ≤7,000 K
8-foot single pin slimline	≤4,500 K
	>4,500 K and ≤7,000 K
8-foot recessed double contact high output	≤4,500 K
	>4,500 K and ≤7,000 K
4-foot T5, miniature bipin standard output	≤4,500 K
	>4,500 K and ≤7,000 K
4-foot T5, miniature bipin high output	≤4,500 K
	>4,500 K and ≤7,000 K

Issue 5: DOE requests feedback on the current GSFL product classes and whether changes to these individual product classes and their descriptions should be made or whether certain classes should be merged or separated. DOE further requests feedback on whether combining or separating certain classes could impact product utility by eliminating any performance-related features or impact the stringency of the current energy conservation standard for these products.

Issue 6: DOE seeks information regarding any other new product classes it should consider for inclusion in its analysis of GSFLs. Specifically, DOE requests information on the performance-related features (*e.g.,* dimmability, lifetime, *etc.*) that provide unique consumer utility and data detailing the corresponding impacts on energy use that would justify separate product classes (*i.e.,* explanation for why the presence of these performance-related features would increase energy consumption).

Issue 7: DOE seeks information on whether there are issues with dimming reduced wattage GSFLs, and if so, what are the specific issues and for what types of GSFLs do they occur.

Issue 8: DOE requests information regarding the maximum efficacy achievable by 2-foot U-shaped lamps with 1 5⁄8 inch spacing versus those with 6 inch spacing and the utility that each offer consumers. DOE seeks information on the shipment volume of 2-foot U-shaped lamps with 1 5⁄8 inch spacing[8] versus those with 6 inch spacing.

For IRLs, the current energy conservation standards specified in 10 CFR 430.2(n) are based on 8 product classes as analyzed in the 2015 GSFL–IRL ECS final rule, separated according to the following three factors: (1) Rated voltage; (2) lamp spectrum; and (3) lamp diameter. 80 FR 4042, 4063–4064. Table II.2 lists the current product classes for IRLs.

TABLE II.2—CURRENT IRL PRODUCT CLASSES

Lamp type	Diameter (in inches)	Input voltage
Standard Spectrum	>2.5	≥125 Volts (V)
		<125 V
	≤2.5	≥125 V
		<125 V
Modified Spectrum	>2.5	≥125 V
		<125 V

[8] Spacing refers to the length between the legs of a U-shaped fluorescent lamp.

TABLE II.2—CURRENT IRL PRODUCT CLASSES—Continued

Lamp type	Diameter (in inches)	Input voltage
	≤2.5	≥125 V <125 V

Issue 9: DOE requests feedback on the current IRL product classes and whether changes to these individual product classes and their descriptions should be made or whether certain classes should be merged or separated. DOE further requests feedback on whether combining or separating certain classes could impact product utility by eliminating any performance-related features or impact the stringency of the current energy conservation standard for these products.

Issue 10: DOE seeks information regarding any other new product classes it should consider for inclusion in its analysis of IRLs. Specifically, DOE requests information on performance-related features (*e.g.,* length, beam spread, *etc.*) that provide unique consumer utility and data detailing the corresponding impacts on energy use that would justify separate product classes (*i.e.,* explanation for why the presence of these performance-related features would increase energy consumption).

Issue 11: DOE requests information regarding the maximum efficacy achievable by the certain ER, BR, and R lamps newly included in this analysis and whether ER, BR, and R lamps offer the consumer unique utility. DOE also requests information regarding the shipments of the certain ER, BR, and R lamps exempt from current standards compared to the shipments of other ER, BR, and R lamps that must comply with current standards.

2. Technology Assessment

In analyzing the feasibility of potential new or amended energy conservation standards, DOE uses information about existing and past technology options and prototype designs to help identify technologies that manufacturers could use to meet and/or exceed a given set of energy conservation standards under consideration. In consultation with interested parties, DOE intends to develop a list of technologies to consider in its analysis. That analysis will likely include a number of the technology options DOE previously considered during its most recent rulemaking for GSFLs and IRLs. A complete list of those prior options appears in Table II.3 for GSFLs and Table II.4 for IRLs of this RFI.

TABLE II.3—GSFL TECHNOLOGY OPTIONS FROM THE 2015 GSFL–IRL ECS FINAL RULE

Name of technology option	Description
Highly Emissive Electrode Coatings	Improved electrode coatings allow electrons to be more easily removed from electrodes, reducing lamp power and increasing overall efficacy.
Higher Efficiency Lamp Fill Gas Composition	Fill gas compositions improve cathode thermionic emission or increase mobility of ions and electrons in the lamp plasma.
Higher Efficiency Phosphors	Phosphors increase the conversion of ultraviolet light into visible light.
Glass Coatings	Coatings on inside of bulb enable the phosphors to absorb more UV energy, so that they emit more visible light.
Higher Efficiency Lamp Diameter	Optimal lamp diameters improve lamp efficacy.
Multi-Photon Phosphors	Phosphors emit more than one visible photon for each incident UV photon.

TABLE II.4—IRL TECHNOLOGY OPTIONS FROM THE 2015 GSFL–IRL ECS FINAL RULE

Name of technology option	Description
Higher Temperature Operation	Operating the filament at higher temperatures, the spectral output shifts to lower wavelengths, increasing its overlap with the eye sensitivity curve.
Microcavity Filaments	Texturing, surface perforations, microcavity holes with material fillings, increasing surface area and thereby light output.
Novel Filament Materials	More efficient filament alloys that have a high melting point, low vapor pressure, high strength, high ductility, or good radiating characteristics.
Thinner Filaments	Thinner filaments to increase operating temperature. This measure may shorten the operating life of the lamp.
Crystallite Filament Coatings	Layers of micron or submicron crystallites deposited on the filament surface that increases emissivity of the filament.
Higher Efficiency Inert Fill Gas	Filling lamps with alternative gases, such as Krypton, to reduce heat conduction.
Higher Pressure Tungsten-Halogen Lamps	Increased halogen bulb burner pressurization, allowing higher temperature operation.
Non-Tungsten-Halogen Regenerative Cycles	Novel filament materials that regenerate.
Infrared Glass Coatings	When used with a halogen burner, this is referred to as an HIR lamp. Infrared coatings on the inside of the bulb to reflect some of the radiant energy back onto the filament.
IR Phosphor Glass Coatings	Phosphor coatings that can absorb IR radiation and re-emit it at shorter wavelengths (visible region of light), increasing the lumen output.
UV Phosphor Glass Coatings	Phosphor coatings that convert UV radiation into longer wavelengths (visible region of light), increasing the lumen output.

TABLE II.4—IRL TECHNOLOGY OPTIONS FROM THE 2015 GSFL–IRL ECS FINAL RULE—Continued

Name of technology option	Description
Electron Stimulated Luminescence	A low voltage cathodoluminescent phosphor that emits green light (visible region of light) upon impingement by thermally ejected electrons, increasing the lumen output.
Higher Efficiency Reflector Coatings	Alternative reflector coatings such as silver, with higher reflectivity increase the amount of directed light.
Corner Reflectors	Individual corner reflectors in the cover glass that reflect light directly back in the direction from which it came.
High Reflectance Filament Supports	Filament supports that include a reflective face that reflects light to another filament, the reflective face of another filament support, or radially outward.
Permanent Infrared Reflector Coating Shroud	Permanent shroud with an IR reflector coating and a removable and replaceable lamp can increase efficiency while reducing manufacturing costs by allowing IR reflector coatings to be reused.
Higher Efficiency Burners	A double-ended burner that features a lead wire outside of the burner, where it does not interfere with the reflectance of energy from the burner wall back to the burner filament in HIR lamps.

Issue 12: DOE seeks information on the technologies listed in Table II.3 and Table II.4 of this RFI regarding their applicability to the current market and how these technologies may impact the efficacy of GSFLs and IRLs (including certain ER, BR, and R IRLs) as measured according to the DOE test procedure. DOE also seeks information on how these technologies may have changed since they were considered in the 2015 GSFL–IRL ECS final rule analysis. Specifically, DOE seeks information on the range of efficiencies or performance characteristics that are currently available for each technology option.

Issue 13: DOE seeks information on the technologies listed in Table II.3 and Table II.4 of this RFI regarding their market adoption, costs, and any concerns with incorporating them into products (*e.g.,* impacts on consumer utility, potential safety concerns, manufacturing/production/implementation issues, *etc.*), particularly as to changes that may have occurred since the 2015 GSFL–IRL ECS final rule analysis.

Issue 14: DOE seeks comment on other technology options that it should consider for inclusion in its analysis and if these technologies may impact product features or consumer utility.

C. Screening Analysis

The purpose of the screening analysis is to evaluate the technologies that improve lamp efficacy to determine which technologies will be eliminated from further consideration and which will be passed to the engineering analysis for further consideration.

DOE determines whether to eliminate certain technology options from further consideration based on the following criteria:

(1) *Technological feasibility.* Technologies that are not incorporated in commercial products or in working prototypes will not be considered further.

(2) *Practicability to manufacture, install, and service.* If it is determined that mass production of a technology in commercial products and reliable installation and servicing of the technology could not be achieved on the scale necessary to serve the relevant market at the time of the compliance date of the standard, then that technology will not be considered further.

(3) *Adverse impacts on product utility or product availability.* If a technology is determined to have significant adverse impact on the utility of the product to significant subgroups of consumers, or result in the unavailability of any covered product type with performance characteristics (including reliability), features, sizes, capacities, and volumes that are substantially the same as equipment generally available in the United States at the time, it will not be considered further.

(4) *Adverse impacts on health or safety.* If it is determined that a technology will have significant adverse impacts on health or safety, it will not be considered further.

10 CFR part 430, subpart C, appendix A, 4(a)(4) and 5(b).

Technology options identified in the technology assessment are evaluated against these criteria using DOE analysis and inputs from interested parties (*e.g.,* manufacturers, trade organizations, and energy efficiency advocates). Technologies that pass through the screening analysis are referred to as ''design options'' in the engineering analysis. Technology options that fail to meet one or more of the four criteria are eliminated from consideration.

Additionally, DOE notes that the four screening criteria do not directly address the proprietary status of technology options. DOE only considers potential efficiency levels achieved through the use of proprietary designs in the engineering analysis if they are not part of a unique pathway to achieve that efficiency level (*i.e.,* if there are other non-proprietary technologies capable of achieving the same efficiency level).

Table II.5 and Table II.6 of this RFI summarize the technology options that DOE screened out in the 2015 GSFL–IRL ECS final rule, and the applicable screening criteria.

TABLE II.5—SCREENED OUT GSFL TECHNOLOGY OPTIONS FROM THE 2015 GSFL–IRL ECS FINAL RULE

Screened technology option	EPCA Criteria (X = Basis for Screening Out)			
	Technological feasibility	Practicability to manufacture, install, and service	Adverse impact on product utility	Adverse impacts on health and safety
Multi-Photon Phosphors	X	X	.....	.....

TABLE II.6—SCREENED OUT IRL TECHNOLOGY OPTIONS FROM THE 2015 GSFL–IRL ECS FINAL RULE

Screened technology option	EPCA Criteria (X = Basis for Screening Out)			
	Technological feasibility	Practicability to manufacture, install, and service	Adverse impact on product utility	Adverse impacts on health and safety
Microcavity Filaments	X	X	X	
Novel Filament Materials	X	X	X	
Crystallite Filament Coatings	X	X		
Non-Tungsten-Halogen Regenerative Cycles	X	X	X	
Infrared Phosphor Glass Coating	X	X		
Ultraviolet Phosphor Glass Coating	X	X		
Electron Stimulated Luminescence	X	X		
Corner Reflectors	X	X		
High Reflectance Filament Supports	X	X		
Permanent Infrared Reflector Coating Shroud	X	X		
Higher Efficiency Burners for Small Diameter IRLs (less than or equal to 2.5 inches)			X	
High Efficiency Gold Reflector Coatings			X	

Issue 15: With respect to the screened out technology options listed in Table II.5 and Table II.6 of this RFI, DOE seeks information on whether these options would, based on current and projected assessments regarding each of them, remain screened out for GSFLs and IRLs (including certain ER, BR, and R lamps) under the four screening criteria described in this section. With respect to each of these technology options, what steps, if any, could be (or have already been) taken to facilitate the introduction of each option as a means to improve the energy performance of GSFLs and IRLs and the potential to impact consumer utility of the GSFLs and IRLs.

Issue 16: DOE seeks information regarding how the screening criteria would affect any other technology options not already identified in this document with respect to their potential use in GSFLs and IRLs (including certain ER, BR, and R lamps).

D. Engineering Analysis

The engineering analysis estimates the cost-efficiency relationship of products at different levels of increased energy efficacy (''efficacy levels''). This relationship serves as the basis for the cost-benefit calculations for customers, manufacturers, and the Nation. In determining the cost-efficiency relationship, DOE estimates the increase in manufacturer production cost (''MPC'') associated with increasing the efficiency of product above the baseline, up to the maximum technologically feasible (''max-tech'') efficacy level for each product class.

DOE historically has used the following three methodologies to generate incremental manufacturing costs and establish efficacy levels (''ELs'') for analysis: (1) The design-option approach, which provides the incremental costs of adding to a baseline model design options that will improve its efficacy; (2) the efficacy-level approach, which provides the relative costs of achieving increases in efficacy levels, without regard to the particular design options used to achieve such increases; and (3) the cost-assessment (or reverse engineering) approach, which provides ''bottom-up'' manufacturing cost assessments for achieving various levels of increased efficacy, based on detailed cost data for parts and material, labor, shipping/packaging, and investment for models that operate at particular efficacy levels.

Because GSFLs and IRLs are difficult to reverse-engineer (*i.e.,* not easily disassembled), DOE is considering directly deriving end-user prices for the lamps covered in this evaluation. Specifically, DOE is considering deriving ELs in the engineering analysis and end-user prices in the product price determination. By combining the results of the engineering analysis and the product price determination, DOE can derive typical inputs for use in the life-cycle cost (''LCC'') analysis and national impact analysis (''NIA'').

1. Representative Product Classes

For the 2015 GSFL–IRL ECS final rule, DOE did not analyze all GSFL and IRL product classes. Rather, DOE identified and focused on representative product classes and then scaled the ELs from representative product classes to those product classes it did not analyze directly (see section II.D.4 for further details on scaling). For GSFLs, DOE identified lamps with CCTs less than 4,500 K (with the exception of the 2-foot U-shaped lamps) as representative product classes due to their high market volume. 80 FR 4042, 4067. For IRLs, DOE identified standard spectrum lamps, with diameters greater than 2.5 inches, and input voltage less than 125 V as the representative product class due to their high market volume. 80 FR 4042, 4075. Consistent with this approach, DOE tentatively plans to analyze the aforementioned product classes as representative.

2. Baseline lamps

For each representative product class, DOE selects a baseline lamp as a reference point against which any changes resulting from new or amended energy conservation standards can be measured. Typically, a baseline model is the most common, least efficacious lamp sold in a given product class. DOE also considers other lamp characteristics in choosing the most appropriate baseline for each product class such as wattage, lumen output, and lifetime.

Consistent with this analytical approach, DOE tentatively plans to consider the current minimum energy conservation standards (which were required for compliance starting on January 26, 2018 for GSFLs and July 14, 2012 for IRLs) to establish the baseline model for each product class. As noted previously, the current GSFL and IRL standards are based on lamp efficacy. The current standards for GSFLs are found in 10 CFR 430.32(n)(4) and for IRLs in 10 CFR 430.32(n)(6). DOE tentatively plans to identify efficacies of products from the DOE's Compliance Certification Management System (''CCMS'') database.

Issue 17: DOE requests feedback on whether the current energy conservation standards for GSFLs and IRLs provide an appropriate baseline efficiency level

for DOE to use in evaluating whether to amend the current energy conservation standards for any of the product classes regulated by DOE. DOE requests data and suggestions to select the baseline models in order to better evaluate amending energy conservation standards for GSFLs and IRLs. In particular, DOE requests comment on the most common wattages, diameters, lifetimes, and features of GSFLs and IRLs (including certain ER, BR, and R lamps) sold today and whether these characteristics vary in popularity based on the region in which the lamps are sold.

Issue 18: DOE requests feedback on how to determine baseline models for product classes that have lamps with minimum efficacies above the existing standard (*i.e.,* T5 SO and T5 HO lamps).

Issue 19: DOE requests feedback on the appropriate baseline models for any newly analyzed product classes for which standards are not currently in place or for the contemplated combined product classes, as discussed in II.B.1 of this document.

3. Efficacy Levels and Maximum Technologically Feasible Levels

In the 2015 GSFL–IRL final rule, for GSFLs, DOE selected more efficacious substitutes with characteristics (*e.g.,* CCT, color rendering index [''CRI''], lifetime) as similar as possible to the baseline lamps. 80 FR 4042, 4067. DOE also ensured that full wattage lamps could meet each EL. 80 FR 4042, 4069–4070. Because fluorescent lamps operate on a ballast in practice, to capture real-world energy use and light output, DOE analyzed lamp-and-ballast systems in the engineering analysis. DOE analyzed more efficacious systems that maintain mean lumen output within 10 percent of the baseline, when possible.

For IRLs, in the GSFL–IRL ECS final rule, DOE considered substitute lamps that saved energy and, where possible, had a light output within 10 percent of the baseline lamp's light output. *Id.* at 80 FR 4076. For IRLs, DOE developed a continuous equation that specifies a minimum efficacy requirement across wattages and represents the potential efficacy a lamp can achieve using a particular design option.

In the 2015 GSFL–IRL ECS final rule, after identifying more efficacious substitutes for each baseline model, DOE developed ELs. DOE developed ELs based on: (1) The design options associated with the specific lamps studied; (2) the ability of lamps across wattages to comply with the standard level of a given product class; [9] and (3) the maximum technologically feasible efficacy level or ''max-tech''. For GSFLs, DOE used initial lumens from manufacturer catalogs and ANSI wattages, where possible, to develop initial ELs. DOE then compared these ELs to CCMS data and adjusted levels downward as necessary.

In the 2015 GSFL–IRL ECS final rule, for GSFLs, DOE adopted the highest efficiency levels for the 4-foot MBP, 4-foot T5 SO, and 4-foot T5 HO product classes, requiring the use of 800 series rare earth phosphors for full wattage lamps. DOE maintained the baseline level for the 8-foot SP slimline product class, representing the use of less efficacious 800 series rare earth phosphors for full wattage lamps. DOE also maintained the baseline level for the 8-foot RDC HO product class, representing the use of less efficacious 700 series rare earth phosphors for full wattage lamps. This combination of ELs for the GSFL product classes represented the maximum net present value (''NPV'').

In the 2015 GSFL–IRL ECS final rule, DOE proposed one EL representing the use of either a halogen infrared (''HIR'') lamp with a lifetime of 2,500 hours or an improved HIR lamp that may utilize improvements in reflector coatings with a lifetime of 4,200 hours. However, DOE did not adopt this EL because of the potential reduction in industry value and potential negative costs to the consumer in the scenario where manufacturers shortened the lifetime of IRLs. Instead, DOE maintained the baseline level requiring the use of a halogen lamp with a lifetime of 1,500 hours that utilizes a higher efficiency inert fill gas and a higher efficiency reflector coating.

The maximum available efficacies for the analyzed product classes from the 2015 GSFL–IRL ECS final rule are included in Table II.7 for GSFLs, and Table II.8 of this RFI.

TABLE II.7—GSFL MAXIMUM EFFICACY LEVELS FROM THE 2015 GSFL–IRL ECS FINAL RULE

CCT	Lamp type	Efficacy level (lumens/watt)
≤ 4,500 K.	4-foot medium bipin.	92.4
	8-foot single pin slimline.	99.0 *
	8-foot recessed double contact HO.	97.6 *
	4-foot T5 miniature bipin SO.	95.0
	4-foot T5 miniature bipin HO.	82.7

* indicates maximum efficacy levels not adopted in the 2015 GSFL–IRL ECS final rule.

TABLE II.8—IRL MAXIMUM EFFICACY LEVELS FROM THE 2015 GSFL–IRL ECS FINAL RULE

Lamp type	Diameter	Voltage	EL 1
Standard spectrum	> 2.5 inches	< 125 V	$6.2P^{0.27}$ *

P = rated wattage; * indicates maximum efficacy levels not adopted in the 2015 GSFL–IRL ECS final rule.

DOE defines a max-tech efficacy level to represent the theoretical maximum possible efficacy if all available design options are incorporated in a model. In the 2015 GSFL–IRL ECS rule all max-tech levels analyzed were commercially available. In many cases, the max-tech efficiency level is not commercially available because it is not economically feasible. Since the 2015 GSFL–IRL ECS final rule, DOE found, compared to values in Table II.7 of this RFI, GSFLs that indicate a 6 percent increase in efficacy for the 4-foot MBP product class, a 3 percent increase in efficacy for the 8-foot SP slimline product class, an 11 percent increase in efficacy for the 8-foot RDC HO product class, a 4 percent increase in efficacy for the 4-foot T5 miniature bipin (MiniBP) SO product class, and a 17 percent increase in efficacy for the 4-foot T5 MiniBP HO product class. Since the GSFL–IRL ECS final rule, DOE found, compared to the value in Table II.8 of this RFI, IRLs that indicate a 5 percent increase in efficacy for the standard spectrum, > 2.5 inches

[9] Efficacy levels span multiple lamps of different wattages. In selecting ELs, DOE considered whether these multiple lamps can meet the standard levels.

diameter, < 125 V rated voltage product class.

Issue 20: DOE seeks input on the maximum achievable efficacy levels for GSFLs and IRLs (including certain ER, BR, and R lamps).

Issue 21: DOE seeks feedback on what design options would be incorporated at a max-tech efficacy level, and the efficacies associated with those levels. As part of this request, DOE also seeks information as to whether there are limitations on the use of certain combinations of design options.

4. Scaling to Other Product Classes

As noted previously, for the GSFL–IRL ECS final rule DOE analyzed the representative product classes directly. DOE then scaled the levels developed for the representative product classes to determine levels for product classes not analyzed directly.

For GSFLs, in the 2015 GSFL–IRL ECS final rule, DOE did not directly analyze the 2-foot U-shaped lamps, and instead established ELs for this product class by scaling from ELs developed for the 4-foot MBP product class. DOE developed the scaling factor by comparing the efficacy of 2-foot U-shaped GSLs and the equivalent 4-foot MBP GSLs with the only difference between the two lamp types being the shape. For scaling ELs in the 4-foot MBP product class to ELs for the 2-foot MBP product class, DOE determined an average efficacy reduction of 8 percent. DOE also did not directly analyze lamps with CCTs greater than 4,500K and instead scaled the efficacy levels from lamps with CCTs less than or equal to 4,500K. DOE developed scaling factors for each product class with the higher CCT value by identifying pairs of the same lamp type differing only by CCT. DOE determined an average efficacy reduction of 4 percent for the 4-foot MBP product class, 2 percent for the 2-foot U-shaped product class, 3 percent for the 8-foot SP slimline product class, 4 percent for the 8-foot RDC HO product class, 6 percent for the T5 MiniBP SO product class, and 7 percent for the T5 MiniBP HO product class. 80 FR 4042, 4074; see 2015 GSFL–IRL ECS final rule chapter 5 technical support document (''TSD'').[10]

Issue 22: DOE requests feedback on the average efficacy difference between 2-foot MBP and 4-foot MBP lamps, where the only difference is shape; and between lamps with CCT less than or equal to 4,500K and CCT greater than 4,500K, where the only difference is CCT.

For IRLs, in the 2015 GSFL–IRL ECS final rule, DOE did not directly analyze modified spectrum IRLs, and instead established ELs for this product class by scaling from the ELs developed for the standard spectrum product class. DOE developed a scaling factor by comparing pairs of standard spectrum and modified spectrum IRLs, where each pair had the same bulb shape, rated life, rated voltage, and filament shape, and differed only in spectrum. DOE determined that an efficacy reduction of 15 percent was appropriate. 80 FR 4042, 4081.

DOE also did not directly analyze IRLs with diameters less than or equal to 2.5 inches, and instead established ELs for this product class by scaling from the ELs developed for the IRL product class with diameters greater than 2.5 inches. DOE developed a scaling factor by comparing the halogen PAR20 lamp (the most common IRL with a diameter less than or equal to 2.5 inches) with the same type of halogen PAR30 or PAR38. For scaling IRLs with smaller diameters with larger diameters, DOE determined an average efficacy reduction of 12 percent.

DOE also did not directly analyze IRLs with rated voltages greater than or equal to 125 V, and instead established ELs for this product class by scaling from the ELs developed for the IRL product class with rated voltages less than 125 V. Most consumers operate 130 V lamps at 120 V, which slightly decreases their efficacy but increases their lifetime. DOE developed a scaling factor by using the Illuminating Engineering Society of North America (IESNA) Lighting Handbook equations that relate lifetime, lumens, and wattage to voltage of incandescent lamps to represent the potential increase in efficacy of a 130 V lamp operated at 120 V. Specifically, the scaling factor captured the difference in efficacy between a 130 V lamp operating at 130 V and a 130 V lamp operating at 120 V with the same lifetime as the lamps analyzed in the 120 V product class. *Id.* at 4080–1.

Issue 23: DOE requests feedback, including any relevant data, on the average efficacy difference between the standard and modified spectrum IRLs, where the only difference is spectrum; between IRLs with diameters less than or equal to 2.5 inches and greater than 2.5 inches, where the only difference is diameter; and between IRLs with rated voltages less than or equal to 125 V and greater than 125 V, where the only difference is rated voltage.

E. Product Price Determination

In generating end-user price inputs for the LCC analysis and NIA, DOE must identify distribution channels (*i.e.,* how the products are distributed from the manufacturer to the consumer), and estimate relative sales volumes through each channel. In the 2015 GSFL–IRL ECS final rule, DOE determined end-user prices for GSFLs and IRLs by gathering publicly available pricing data. DOE identified three main distribution channels through which GSFLs and IRLs are sold and their relative price range: (1) State procurement (low prices), (2) large retail distributors (medium prices), and (3) internet retailers (high prices). Based on manufacturer feedback, DOE determined an aggregated percentage of shipments that go through each of the main channels for GSFLs and IRLs: 10 Percent for state procurement, 85 percent for large distributors, and 5 percent for internet retailers. DOE then applied these percentages respectively to the average low price determined state procurement, average medium price determined for large distributors, and the average high price determined for internet retailers. The sum of these weighted prices was used as the average consumer price for GSFLs and IRLs in the main LCC analysis and NIA. 80 FR 4042, 4082. See also chapter 7 of the 2015 GSFL–IRL ECS final rule TSD.

Issue 24: DOE requests comments on the described methodology for the pricing analysis, as well as information on the existence of any distribution channels other than those described and their assigned weighting. DOE also requests information on whether this methodology is appropriate for certain ER, BR, and R IRLs.

F. Energy Use Analysis

As part of the rulemaking process, DOE conducts an energy use analysis to identify how products are used by consumers, and thereby determine the energy savings potential of energy efficiency improvements. In the 2015 GSFL–IRL ECS final rule, to develop annual energy-use estimates, DOE multiplied annual usage (in hours per year) by the lamp power (in watts) for IRLs and the lamp-and-ballast system input power (in watts) for GSFLs. DOE characterized representative lamp or lamp-and-ballast systems in the engineering analysis. 80 FR 4042, 4082. For GSFLs, DOE considered two different lamp-and-ballast system scenarios: (1) A lamp replacement scenario in which the consumer selects a reduced wattage replacement lamp that can operate on the installed ballast

[10] The 205 GSFL–IRL ECS final rule TSD is available at: *https://www.regulations.gov/document?D=EERE-2011-BT-STD-0006-0066.*

and (2) a lamp-and-ballast replacement scenario in which the consumer selects a lamp that has the same or lower wattage compared to the baseline lamp and also selects a new ballast with improved performance characteristics. DOE selected lamp-and-ballast systems that maintained mean lumen output within 10 percent of the baseline system, when possible, giving priority to energy savings. 80 FR 4042, 4068.

To characterize the country's average use of lamps for a typical year, in the 2015 GSFL–IRL ECS final rule, DOE developed annual operating hour distributions by sector, using data published in the 2010 U.S. Lighting Market Characterization report (''2010 LMC''), the Commercial Building Energy Consumption Survey (''CBECS''), the Manufacturer Energy Consumption Survey (''MECS''), and the Residential Energy Consumption Survey (''RECS''). Because the 2010 LMC operating hour data used is based on building surveys and metering data, it accounted for the use of occupancy sensors. 80 FR 4042, 4082.

Table II.9 provides the operating hours from the 2015 GSFL–IRL ECS final rule.

TABLE II.9—AVERAGE OPERATING HOURS BY SECTOR AND LAMP TYPE FROM THE 2015 GSFL–IRL ECS FINAL RULE

Sector	Lamp type	Average annual operating hours *hr/year*
Residential	GSFL	634
	IRL	763
Commercial	GSFL	4,065
	IRL	4,532
Industrial	GSFL	4,586

DOE did account for the use of dimmers or light sensors by modeling GSFLs and IRLs on dimmers and developing associated energy-use results as a sensitivity analysis. For GSFLs, DOE determined that the average reduction of system lumen output for GSFLs was 33 percent, based on research and manufacturer input. For IRLs, DOE modeled two scenarios: (1) All lamps are on dimmers and on average consumers using dimmers reduce lamp wattage by 20 percent, corresponding to a lumen reduction of 25 percent and an increase in lifetime by a factor of 3.94 at the baseline and (2) there is a distribution of lamps on dimmers and weighted-average characteristics were determined based on estimated percentage of IRLs that operate on dimmers and sensors (29 percent for residential sector, 5 percent for commercial sector). 80 FR 4042, 4083. See also, chapter 6 of the 2015 GSFL–IRL ECS final rule TSD.

Issue 25: DOE seeks feedback on the average annual operating hours for GSFLs and IRLs (including certain ER, BR and R lamps) by sector, and whether the values in Table II.9 continue to be adequate for future potential analyses. Please provide relevant data in support of whatever alternative values that DOE should use in lieu of its values listed in these tables.

Issue 26: DOE seeks feedback on its methodology and data used to determine impact of lighting controls for GSFLs and IRLs (including certain ER, BR, and R lamps), and whether it is adequate for future potential analyses.

Issue 27: DOE seeks feedback on any type of lighting control not mentioned that should be included in future potential analyses of GSFLs or IRLs (*e.g.,* smart controls). Please provide relevant supporting data including how it is distinct from or works in conjunction with dimmers or sensors, prevalence of use by sector, and associated annual operating hours.

G. Life-Cycle Cost and Payback Analysis

DOE conducts the LCC and payback period (''PBP'') analysis to evaluate the economic impacts of potential energy conservation standards for GSFLs and IRLs on individual customers. For any given efficacy level, DOE measures the PBP and the change in LCC relative to an estimated baseline level. The LCC is the total consumer expense over the life of the product, consisting of purchase, installation, and operating costs (expenses for energy use, maintenance, and repair). Inputs to the calculation of total installed cost include cost of the product—which includes consumer product price and sales taxes—and installation costs. Inputs to the calculation of operating expenses include annual energy consumption, energy prices and price projections, repair and maintenance costs, product lifetimes, discount rates, and the year that compliance with amended standards is required.

In the 2015 GSFL–IRL ECS final rule, DOE defined lifetime as the age in hours of operation when a lamp or ballast is retired from service. DOE used manufacturer literature to determine lamp lifetimes. Additionally, DOE assumed that a GSFL subject to group relamping [11] operates for 75 percent of its rated lifetime. For average ballast lifetime, DOE used 15 years for the residential sector and 49,054 hours for the commercial sector. 80 FR 4042, 4087–4088. See also chapter 8 of the 2015 GSFL–IRL ECS final rule TSD.

In the 2015 GSFL–IRL ECS final rule, DOE determined LCC savings for GSFLs under three different consumer purchasing events: (1) Lamp failure, when in a standards scenario a consumer must purchase a standards-compliant lamp that operates on the existing ballast; (2) ballast failure, when in a standards scenario a consumer must purchase a standards-compliant lamp-and-ballast combination such that the system light output stays within 10 percent of the baseline system; (3) new construction and renovation, when light design can be completely new (assuming spacing between lamps does not change) and a consumer must purchase all new fixture installations. Only lamp purchase events were applicable to IRLs, which do not use a ballast. 80 FR 4041, 4087. See also chapter 8 of the 2015 GSFL–IRL ECS final rule TSD.

Issue 28: DOE seeks feedback on the described methodology for determining lifetime (including whether other factors not mentioned may affect lifetime), the frequency of group relamping, and ballast lifetimes for GSFLs, and whether it is valid for use in potential future analyses.

[11] Group relamping refers to the scenario when consumers replace all the lamps in a fixture or area at a predetermined time.

Issue 29: DOE seeks feedback on GSFL and IRL purchasing events for which LCC savings should be determined and information on any other typical purchasing events other than those described.

H. Shipments

DOE develops shipment forecasts of GSFLs and IRLs to calculate the national impacts of potential amended energy conservation standards on energy consumption, NPV, and future manufacturer cash flows. DOE develops shipment projections based on historical data and an analysis of key market drivers for each product. Historical shipment data are used to build up a product stock and also to calibrate the shipments model. The shipments model projects shipments over a 30-year analysis period for the base case (no new standards) and for all standards cases.

In the 2015 GSFL–IRL ECS final rule, separate shipment projections were calculated for the residential sector and for the commercial and industrial sectors. The shipments model used to estimate GSFL and IRL lamp shipments had four main interacting elements: (1) A lamp demand module that estimated the demand for GSFL and IRL lighting for each year of the analysis period; (2) a price-learning module, which projected future prices based on historic price trends; (3) substitution matrices, which specified the product choices available to consumers (lamps as well as lamp-and-ballast combinations for fluorescent lamps) depending on whether they are renovating, in new construction, or replacements; and (4) a market-share module that assigned shipments to product classes, ballasts, and lamp options, based on consumer sensitivities to first costs (prices) and operation and maintenance costs. 80 FR 4042, 4089.

For GSFLs, DOE projected that in cases of renovation or new construction, some fraction of the lighting market being served by T8 lamps will migrate to T5 lamps in the absence of standards. Additionally, DOE allowed all full wattage and reduced wattage lamp versions of the 4-foot MBP lamp type to be coupled to dimming ballasts; with the latter limited to 10 percent of the dimming ballast system market due to performance issues. For the GSFL reference scenario, DOE used the most recent price data (June 2014) for rare earth phosphors (''REO'') but also conducted a sensitivity analysis where the average rare earth phosphor price was 4.5 times the reference level.

For IRLs, DOE assumed all potential switching from PAR to BR lamps had already taken place and accounted for some consumers shifting to light emitting diode (''LED'') lamps with the use of an LED market adoption curve. For additional detail in the development of shipments data in the 2015 GSFL–IRL ECS final rule see chapter 11 of the 2015 GSFL–IRL ECS final rule TSD.

Issue 30: DOE requests information on the migration of GSFL lamp types among GSFL product classes and to exempt products (*e.g.,* high CRI linear fluorescent lamps) or to other lamp technologies and suggestions on how to account for such shifts in its shipment model.

Issue 31: DOE requests information on migration of IRL lamp types among IRL product classes and to exempt products or to other lamp technologies and suggestions on how to account for such shifts in its shipment model.

Table II.10 and Table II.11 of this RFI, respectively, provide GSFL and IRL shipment projections from the 2015 GSFL–IRL ECS final rule for the years 2017 through 2019.

TABLE II.10—PROJECTED GSFL SHIPMENTS FROM THE 2015 GSFL–IRL ECS FINAL RULE

Lamp type	2017	2018	2019
4-ft Medium Bipin (Commercial/Industrial)	295,498	292,682	288,025
4-ft Medium Bipin (Residential)	14,094	13,221	12,564
8-ft Slimline	11,734	11,129	10,858
8-ft High Output	3,340	2,937	2,546
T5 Standard Output	40,565	43,493	45,905
T5 High Output	31,646	33,266	34,493
U-shaped	14,194	14,086	13,908

TABLE II.11—PROJECTED TOTAL IRL SHIPMENTS FROM THE 2015 GSFL–IRL ECS FINAL RULE

Sector	2017	2018	2019
Residential	27,021	24,654	20,974
Commercial	3,746	2,993	2,506

Issue 32: DOE seeks feedback on how the projected shipments in Table II.10 and Table II.11 of this RFI compare to actual shipments of GSFLs and IRLs in these years.

Issue 33: DOE seeks shipment data on GSFLs and IRLs over the last 5-year period, separated by product classes. For each product class of GSFLs, DOE seeks shipment data by lamp diameter.

Issue 34: DOE requests information on the current and past five years of shipments of certain ER, BR, and R lamps. DOE also requests information on expected market trends for these products over the analysis period.

NEMA periodically releases lamp indices. In a recent lamp index report, NEMA stated that shipments for T5, T8, and T12 lamps in the first quarter of 2019 decreased by 12.3 percent, 13.6 percent, and 2.8 percent, respectively compared to the same period the previous year. In the first quarter of 2019 tubular light-emitting diodes (''TLEDs'') accounted for 30.4 percent and T5, T8, and T12 fluorescent lamps accounted for respectively, 8.2 percent, 50.9 percent, and 10.4 percent of fluorescent lamp shipments.[12] Comparatively, in the fourth quarter of 2017, TLEDs accounted for 23.1 percent and T5, T8, and T12 fluorescent lamps accounted for respectively 8.5 percent, 57.1 percent, and 11.4 percent of the fluorescent lamp shipments.[13] NEMA's

[12] *Linear Fluorescent Lamp Indexes Continue Year-Over-Year Decline in First Quarter 2019 while T-LED Market Penetration Increases.* See *https://www.nema.org/Intelligence/Indices/Pages/Linear-Fluorescent-Lamp-Indexes-Continue-Year-Over-Year-Decline-in-First-Quarter-2019-while-T-LED-Market-Penetration-Increa.aspx.*

[13] *Linear Fluorescent Lamp Indexes Continue Year-Over-Year Decline in Fourth Quarter 2017*

Continued

data point to a decline in linear fluorescent shipments and an increase in TLED shipments.

Issue 35: DOE seeks feedback on the projected rate of increase/decline of GSFL and IRL (including certain ER, BR, and R lamps) shipments in the next five years.

Issue 36: DOE also seeks information on the rate of shift from linear fluorescents to TLEDs including what types of GSFLs TLEDs are most frequently replacing (*i.e.,* diameter, length) and in what scenarios are replacements occurring (*i.e.,* single lamp replacement, renovation, new construction).

Issue 37: DOE seeks information regarding the potential variables that could cause consumers to opt to purchase other technologies (such as TLEDs) instead of GSFLs. DOE specifically seeks input on the magnitude of the change in efficiency, first cost, payback, or other variables that could cause consumers to opt for an alternate technology if energy conservation standards for GSFLs were amended.

Issue 38: DOE also seeks information on shifts within reflector incandescent/halogen lamps and/or to other lamp technologies.

Linear fluorescent lamps with a CRI greater than or equal 87 (''high CRI fluorescent lamps'') are not subject to standards. Based on a preliminary review of products on the market, DOE found several high CRI fluorescent lamps on the market. DOE found that most of these products are T12 linear fluorescent lamps comprising mainly of the 4-foot MBP lamp type followed by the 8-foot SP slimline lamp type.

Issue 39: DOE requests information on the portion of the fluorescent lamp market that comprises of lamps with CRI of 87 or higher and information on the common shapes, lengths, diameters, and base types of these lamps. DOE also requests information on the specific applications for which fluorescent lamps with CRI of 87 or higher are used.

Additionally, based on its preliminary review of the market, DOE found several T12 lamps of lengths that are not currently regulated.

Issue 40: DOE requests information on the portion of the fluorescent lamp market comprised of lamps with T12 diameters and the common base types and lengths of those lamps. DOE also requests information on the specific applications for which these T12 lamps are used.

I. National Impact Analysis

The purpose of the NIA is to estimate the aggregate economic impacts of potential efficacy standards at the national level. The NIA assesses the national energy savings (''NES'') and the national NPV of total consumer costs and savings that would be expected to result from new or amended standards at specific efficiency levels.

In the 2015 GSFL–IRL ECS final rule, DOE evaluated the impacts of new and amended standards for GSFLs and IRLs by comparing projections of total energy consumption with amended energy conservation standards to projections of energy consumption without the standards (no new standards). The no-new-standards case projections characterize energy use and consumer costs for each product class in the absence of new or amended energy conservation standards. In characterizing the no-new-standards and standards cases, DOE considered shipments from the shipments model, the mix of efficiencies sold in the absence of amended standards and how they may change, the annual energy consumption and installed cost per unit, and changes in electricity prices. In the reference case DOE assumed lighting controls penetration grows year-by-year in the commercial and industrial sector, as driven by an estimated 75 percent compliance rate with building codes (assuming these building codes remain frozen in time).

DOE reduced the unit energy consumption (UEC) by a fixed 30 percent for the stock of lighting in which controls based on switching only were assumed to operate. For controls systems that incorporate dimming, DOE assumed the energy consumption reductions per those described in section II.F of this RFI.

Since lamps and ballasts are sold separately, DOE considered a broad array of lamp-and-ballast pairings that were representative of what consumer may choose and ensured that the ballast and lamp were compatible and where possible (without sacrificing energy savings) provided light output within 10 percent or less of the baseline lamp-and-ballast system. DOE assumed no rebound effect for lighting. The rebound effect refers to the tendency of a consumer to respond to the cost savings associated with more efficient products in a manner that leads to marginally greater equipment usage, thereby diminishing some portion of anticipated benefits related to improved efficacy. See chapter 11 and 12 of the 2015 GSFL–IRL ECS final rule TSD for a detailed discussion of the NIA.

Issue 41: DOE seeks information on the distribution of lamp efficacy within each product class and whether that is expected to change under the currently applicable energy conservation standards.

Issue 42: DOE seeks information regarding the use of lighting controls at a national level broken down, if possible, by the type of lighting control (*e.g.* occupancy sensors, dimmers, etc.).

Issue 43: DOE seeks comments and information on whether a rebound rate of 0 percent is appropriate.

J. Manufacturer Impact Analysis

The purpose of the manufacturer impact analysis (''MIA'') is to estimate the financial impact of amended energy conservation standards on manufacturers of GSFLs and IRLs, and to evaluate the potential impact of such standards on direct employment and manufacturing capacity. The MIA includes both quantitative and qualitative aspects. The quantitative part of the MIA primarily relies on the Government Regulatory Impact Model (''GRIM''), an industry cash-flow model adapted for each product in this analysis, with the key output of industry net present value (''INPV''). The qualitative part of the MIA addresses the potential impacts of energy conservation standards on manufacturing capacity and industry competition, as well as factors such as product characteristics, impacts on particular subgroups of firms, and important market and product trends.

In the 2015 GSFL–IRL ECS final rule, for the MIA, DOE modeled two standards case markup scenarios to represent the uncertainty regarding the potential impacts on prices and profitability for manufacturers following the implementation of potential amended energy conservation standards: (1) A flat, or preservation of gross margin, markup scenario (absolute dollar markup increases as product costs increase with efficacy) and (2) a preservation of operating profit markup scenario (maintain the no-new-standards case total operating profit in absolute dollars in the standards case, despite higher production costs and investment). In addition, based on manufacturer feedback, for GSFLs, DOE evaluated a two-tiered markup scenario which assumed higher efficacy GSFLs command a higher manufacturer markup and baseline efficacy GSFLs subsequently have a lower manufacturer markup. See chapter 13 of the GSFL–IRL ECS final rule TSD.

while T-LED Market Penetration Increases. See *https://www.nema.org/Intelligence/Indices/Pages/Linear-Fluorescent-Lamp-Indexes-Continue-Year-Over-Year-Decline-in-Fourth-Quarter-2017-while-T-LED-Market-Penetration-Incre.aspx.*

Issue 44: DOE seeks feedback on the manufacturer markup scenarios described above, and whether they are valid for use in potential future analyses.

As part of the MIA, DOE intends to analyze impacts of amended energy conservation standards on subgroups of manufacturers of covered products, including small business manufacturers. DOE uses the Small Business Administration's (''SBA's'') small business size standards to determine whether manufacturers qualify as small businesses, which are listed by the applicable North American Industry Classification System (''NAICS'') code.[14] Manufacturing of GSFLs and IRLs is classified under NAICS 335110, ''Electric Lamp Bulb and Part Manufacturing,'' and the SBA sets a threshold of 1,250 employees or less for a domestic entity to be considered as a small business. This employee threshold includes all employees in a business' parent company and any other subsidiaries.

One aspect of assessing manufacturer burden involves examining the cumulative impact of multiple DOE standards and the product-specific regulatory actions of other Federal agencies that affect the manufacturers of a covered product. While any one regulation may not impose a significant burden on manufacturers, the combined effects of several existing or impending regulations may have serious consequences for some manufacturers, groups of manufacturers, or an entire industry. Assessing the impact of a single regulation may overlook this cumulative regulatory burden. In addition to energy conservation standards, other regulations can significantly affect manufacturers' financial operations. Multiple regulations affecting the same manufacturer can strain profits and lead companies to abandon product lines or markets with lower expected future returns than competing products. For these reasons, DOE conducts an analysis of cumulative regulatory burden as part of its rulemakings pertaining to appliance efficiency.

Issue 45: To the extent feasible, DOE seeks the names and contact information of any domestic or foreign-based manufacturers that distribute GSFLs and IRLs (including certain ER, BR, and R lamps) in the United States.

Issue 46: DOE identified small businesses as a subgroup of manufacturers that could be disproportionally impacted by amended energy conservation standards. DOE requests the names and contact information of small business manufacturers, as defined by the SBA's size threshold, of GSFLs and IRLs (including certain ER, BR, and R lamps) that distribute products in the United States. In addition, DOE requests comment on any other manufacturer subgroups that could be disproportionately impacted by amended energy conservation standards. DOE requests feedback on any potential approaches that could be considered to address impacts on manufacturers, including small businesses.

Issue 47: DOE requests information regarding the cumulative regulatory burden impacts on manufacturers of GSFLs and IRLs (including certain ER, BR, and R lamps) associated with (1) other DOE standards applying to different products that these manufacturers may also make and (2) product-specific regulatory actions of other Federal agencies. DOE also requests comment on its methodology for computing cumulative regulatory burden and whether there are any flexibilities it can consider that would reduce this burden while remaining consistent with the requirements of EPCA.

III. Other Energy Conservation Standards Topics

A. Market Failures

In the field of economics, a market failure is a situation in which the market outcome does not maximize societal welfare. Such an outcome would result in unrealized potential welfare. DOE welcomes comment on any aspect of market failures, especially those in the context of amended energy conservation standards for GSFLs and IRLs.

B. Network Mode/''Smart'' Technology

DOE published an RFI on the emerging smart technology appliance and equipment market. 83 FR 46886 (Sept. 17, 2018). In that RFI, DOE sought information to better understand market trends and issues in the emerging market for appliances and commercial equipment that incorporate smart technology. DOE's intent in issuing the RFI was to ensure that DOE did not inadvertently impede such innovation in fulfilling its statutory obligations in setting efficiency standards for covered products and equipment. DOE seeks comments, data and information on the issues presented in the RFI as they may be applicable to energy conservation standards for GSFLs and IRLs.

C. Other Issues

Additionally, DOE welcomes comments on other issues relevant to the conduct of this rulemaking that may not specifically be identified in this document. In particular, DOE notes that under Executive Order 13771, ''Reducing Regulation and Controlling Regulatory Costs,'' Executive Branch agencies such as DOE are directed to manage the costs associated with the imposition of expenditures required to comply with Federal regulations. See 82 FR 9339 (Feb. 3, 2017). Consistent with that Executive Order, DOE encourages the public to provide input on measures DOE could take to lower the cost of its energy conservation standards rulemakings, recordkeeping and reporting requirements, and compliance and certification requirements applicable to GSFLs and IRLs while remaining consistent with the requirements of EPCA.

IV. Submission of Comments

DOE invites all interested parties to submit in writing by the date specified previously in the **DATES** section of this document, comments and information on matters addressed in this document and on other matters relevant to DOE's consideration of amended energy conservations standards for GSFLs and IRLs. After the close of the comment period, DOE will review the public comments received and may begin collecting data and conducting the analyses discussed in this document.

Submitting comments via http://www.regulations.gov. The *http://www.regulations.gov* web page requires you to provide your name and contact information. Your contact information will be viewable to DOE Building Technologies Office staff only. Your contact information will not be publicly viewable except for your first and last names, organization name (if any), and submitter representative name (if any). If your comment is not processed properly because of technical difficulties, DOE will use this information to contact you. If DOE cannot read your comment due to technical difficulties and cannot contact you for clarification, DOE may not be able to consider your comment.

However, your contact information will be publicly viewable if you include it in the comment or in any documents attached to your comment. Any information that you do not want to be publicly viewable should not be included in your comment, nor in any document attached to your comment. Persons viewing comments will see only first and last names, organization

[14] Available online at *https://www.sba.gov/document/support--table-size-standards.*

names, correspondence containing comments, and any documents submitted with the comments.

Do not submit to *http://www.regulations.gov* information for which disclosure is restricted by statute, such as trade secrets and commercial or financial information (hereinafter referred to as Confidential Business Information (''CBI'')). Comments submitted through *http://www.regulations.gov* cannot be claimed as CBI. Comments received through the website will waive any CBI claims for the information submitted. For information on submitting CBI, see the Confidential Business Information section.

DOE processes submissions made through *http://www.regulations.gov* before posting. Normally, comments will be posted within a few days of being submitted. However, if large volumes of comments are being processed simultaneously, your comment may not be viewable for up to several weeks. Please keep the comment tracking number that *www.regulations.gov* provides after you have successfully uploaded your comment.

Submitting comments via email, hand delivery/courier, or postal mail. Comments and documents submitted via email, hand delivery/courier, or postal mail also will be posted to *http://www.regulations.gov.* If you do not want your personal contact information to be publicly viewable, do not include it in your comment or any accompanying documents. Instead, provide your contact information on a cover letter. Include your first and last names, email address, telephone number, and optional mailing address. The cover letter will not be publicly viewable as long as it does not include any comments.

Include contact information each time you submit comments, data, documents, and other information to DOE. If you submit via postal mail or hand delivery/courier, please provide all items on a CD, if feasible. It is not necessary to submit printed copies. No telefacsimiles (faxes) will be accepted.

Comments, data, and other information submitted to DOE electronically should be provided in PDF (preferred), Microsoft Word or Excel, WordPerfect, or text (ASCII) file format. Provide documents that are not secured, written in English, and free of any defects or viruses. Documents should not contain special characters or any form of encryption and, if possible, they should carry the electronic signature of the author.

Campaign form letters. Please submit campaign form letters by the originating organization in batches of between 50 to 500 form letters per PDF or as one form letter with a list of supporters' names compiled into one or more PDFs. This reduces comment processing and posting time.

Confidential Business Information. According to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email, postal mail, or hand delivery/courier two well-marked copies: One copy of the document marked confidential including all the information believed to be confidential, and one copy of the document marked ''non-confidential'' with the information believed to be confidential deleted. Submit these documents via email or on a CD, if feasible. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

It is DOE's policy that all comments may be included in the public docket, without change and as received, including any personal information provided in the comments (except information deemed to be exempt from public disclosure).

DOE considers public participation to be a very important part of the process for developing energy conservation standards. DOE actively encourages the participation and interaction of the public during the comment period in each stage of the rulemaking process. Interactions with and between members of the public provide a balanced discussion of the issues and assist DOE in the rulemaking process. Anyone who wishes to be added to the DOE mailing list to receive future notices and information about this process or would like to request a public meeting should contact Appliance and Equipment Standards Program staff at (202) 287–1445 or via email at *ApplianceStandardsQuestions@ee.doe.gov.*

Signing Authority

This document of the Department of Energy was signed on February 25, 2020, by Alexander N. Fitzsimmons, Deputy Assistant Secretary for Energy Efficiency, Energy Efficiency and Renewable Energy, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the **Federal Register**.

Signed in Washington, DC, on April 22, 2020.

Treena V. Garrett,

Federal Register Liaison Officer, U.S. Department of Energy.

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DEPARTMENT OF ENERGY

10 CFR Part 1021

[DOE–HQ–2020–0017]

RIN 1990–AA49

National Environmental Policy Act Implementing Procedures

AGENCY: Office of the General Counsel, Department of Energy.

ACTION: Notice of proposed rulemaking and request for comment.

SUMMARY: The U.S. Department of Energy (DOE or the Department) proposes to update its National Environmental Policy Act (NEPA) implementing procedures regarding authorizations issued under section 3 of the Natural Gas Act. These changes will improve the efficiency of the DOE decision-making process by saving time and money in the NEPA review process and eliminating unnecessary environmental documentation. DOE invites public comments on the proposed changes.

DATES: Comments must be received by (or, if mailed, postmarked by) June 1, 2020 to ensure consideration.

ADDRESSES: Documents relevant to this rulemaking are posted on the Federal eRulemaking Portal at *https://www.regulations.gov* (*Docket: DOE–HQ–2020–0017*). Documents posted to this docket include: This notice of proposed rulemaking; DOE's ''Technical Support Document'' which provides additional information; and a ''redline/strikeout'' (markup) file of affected sections of the DOE NEPA regulations indicating the changes proposed in this proposed rule.

Submit comments, labeled ''DOE NEPA/NG Procedures, RIN 1990–AA49,'' by one of the following methods:

1. *Federal eRulemaking Portal: https://www.regulations.gov.* Follow the online instructions for submitting comments electronically. This